What is claimed is:

1. A reluctance type resolver comprising:

a stator, constructed from a magnetic material, having a plurality of excitation teeth, each of which is wound by an excitation winding;

a rotor having magnetic salient sections that are placed to oppose said excitation teeth; and

a detector for detecting the position of said rotor, by detecting a current or voltage of said excitation winding which changes with different phase in response to motion of said rotor; wherein

said excitation winding is wound on each excitation teeth so that the magnetic fluxes through all excitation teeth have the same direction; and

said stator includes bypass magnetic path teeth passing a magnetic flux having a direction opposite to the direction of said excitation teeth.

2. A reluctance type resolver, comprising:

a stator, constructed from a magnetic material, having a plurality of excitation teeth, each of which is wound by an excitation winding;

a rotor having magnetic salient sections that are placed to oppose said excitation teeth; and

a detector for detecting the position of said rotor, by

detecting a current or voltage of said excitation winding which changes with different phase in response to the motion of said rotor; wherein

each of said excitation windings is wound on each of the excitation teeth for a pair of adjacent excitation teeth such that the magnetic flux through each of the paired excitation teeth has directions opposite to each other, and said excitation windings for a pair of excitation teeth are connected in series; and

excitation teeth are provided on said stator so that the pitch of each excitation tooth for each pair of adjacent excitation teeth equals an integral multiple of the pitch of the magnetic salient sections of the rotor.